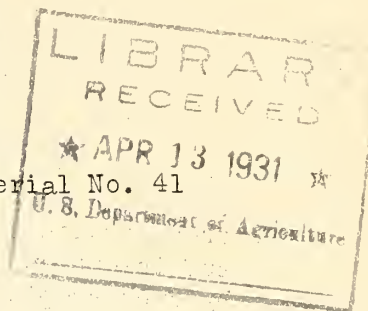


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Excerpt from a radio talk by
W. W. Vincent, chief, western district,
Food and Drug Administration, U. S.
Department of Agriculture, delivered
through KGO, San Francisco, and associated
N. B. C. stations, April 2, 1931.



HOW TO READ THE LABEL

Vitamins

What are vitamins? They are invisible food accessories essential to normal animal nutrition. The consumption of foods containing them is responsible for the prevention of the so-called "Vitamin-Deficiency Diseases." To a Polish chemist, Dr. Funk, we are indebted for the name. He isolated one, determined he had a vital substance necessary to the scheme of life. Chemically, that substance acted like one of the organic products which we term Amines. Throwing the words "vital" and "amine", together, he called the substance "Vitamines." Later it was discovered that certain of the vitamins were not amines and the final "e" was dropped.

In all, five vitamins have been definitely identified. There may be more. Absence of any one of these will manifest itself through the production of certain pathological conditions. Taking them in order we start with Vitamin A, a fat-soluble vitamin. It is the anti-ophthalmic vitamin. Its complete absence results in a lowered resistance of all mucous membranes, which shows up in the experimental animals as an eye infection. This eye infection has given its name to Vitamin A. It is relatively abundant in green vegetables such as spinach, lettuce, cabbage, tomatoes and carrots; also in butter, egg yolks, cod liver oil, milk and the liver, heart and kidneys of animals. Nature distributed it abundantly and a well-balanced diet gives an adequate supply of Vitamin A.

The next is Vitamin B. The vitamin which was originally known as Vitamin B is now known to contain at least two vitamins, known as F or B-1, and G or B-2. B-1 or F is known as the anti-neuritic vitamin. Its complete absence causes polyneuritis and is associated with berri berri. It is abundant in whole cereal grains, legumes (beans and peas), brewers' yeast, tomatoes, and oranges. In fact, it is the most widely distributed of all the vitamins. The B-2 or G factor is sometimes called P.P. or pellagra preventative, since its absence in the diet is manifested in pellagra. This vitamin is present in animal livers, eggs, milk, yeast, and the legumes. It is claimed that a lack of sufficient vitamin B in the diet will result in loss of appetite, fatigue, nervousness, and constipation.

Vitamin C is the fourth, sometimes called the anti-scurvy or anti-scorbutic vitamin. It is less stable than some of the others, heat rapidly destroying it, especially in the presence of air or oxygen. It is abundant in raw cabbage, citrus fruits, tomatoes, lettuce, raw spinach. The absence of these fresh fruits and vegetables has been responsible for the appearance of scurvy among sailors, soldiers, and explorers

who, for long periods of time, may not be able to receive fresh fruits and vegetables. Here's an interesting fact. Cereal grains in the dry state are practically devoid of Vitamin C but, when germination or sprouting takes place, the vitamin is synthesized within the product, and the British Army has upon occasion taken advantage of this fact and required that sprouted lentils be fed to their troops in those districts where fresh fruits and vegetables were unattainable. Children receiving insufficient quantities of Vitamin C will probably manifest the condition by such symptoms as a bleeding at the edge of the gums, perhaps looseness of the teeth, and a tendency to fragility of bones, accompanied by a profound specific anemia.

Vitamin D is the fifth, the anti-rachitic vitamin. A deficiency of this vitamin in the growing animal results in rickets, poor teeth, and soft bones. The assimilation of calcium and phosphorus for the development of bone depends upon the presence of this vitamin. By the subjection to rays of ultra-violet light, certain food materials which contain a substance called ergosterol will take on Vitamin D properties. The best food sources for your Vitamin D are to be found in butter, egg yolk, and animal livers. It has recently been found that certain canned fish, such as salmon and sardines, are good sources of Vitamin D. You will also get Vitamin D by exposure of your body to sunshine, and artificially produced ultra-violet rays. Cod liver oil, however, is about your best source for both Vitamin A and D, if you feel you have to bolster up a deficiency in either of these, or both.

You may hear of another vitamin called Vitamin E, or the anti-sterility vitamin. The existence of this vitamin has been disputed by many experts on the subject. It is supposed to influence reproduction and is said to be found in oats, corn, wheat, fresh lettuce and other green leaf materials, and also in most vegetable oils.

The presence of vitamins, as such, is not determined in laboratory test tubes. Their presence and amount in various food products are established through experimentation on animals. People and animals are unable to provide vitamins within their bodies, so it is therefore incumbent upon you, if you would get sufficient quantity, to partake of a well-balanced diet. It has been said that when the importance of vitamins is fully recognized and given due weight in the planning of food supplies, there will probably be but rare occasion for the purchase of vitamins in any other form than in that of staple foods. The vitamin-deficiency diseases are somewhat of a rarity in this country, most frequently encountered in the poorer sections of our larger cities where economic conditions perhaps prevent the inclusion of sufficient fresh vegetables in the diet.

In my health-food talk, I cautioned you against believing all statements that might appear upon labels of so-called vitamin preparations; told you that some bore false and extravagant claims and that, since the testing of those products was a slow and expensive process, it would be some time before the Food and Drug Administration could as-

sure you that all such claims as appeared upon labels would convey the truth. Where you encounter the word, "Irradiated," on the food-package label, remember that means the product was subjected to the rays of ultra-violet light. Whether it has undergone a change in vitamin D content during that treatment depends entirely upon whether the product, to begin with, contained Ergosterol. Ergosterol occurs in most food products in such minute quantities that irradiation cannot impart adequate quantities of vitamin D to protect against rickets. Intelligence in the purchase of a suitable and varied diet selected from the many natural, vitamin-containing foods on the market, is all that is necessary to give the consumer his vitamin supply.

